



# **PGR112 – Step 14: JDBC – part 2**

**Object Oriented Programming**

**Bogdan Marculescu / [bogdan.marculescu@kristiania.no](mailto:bogdan.marculescu@kristiania.no)**

# Agenda

- Transactions, committment, rollback
- SQL injections
- Prepared statements

# Transactions, Commitment, Rollback

- So, you know about transactions, right?
- Transactions are committed automatically
- But we can set auto-commit to false (and commit transactions ourselves)
- Especially when we have several operations that have to ALL have the same status



# Transactions, Commitment, Rollback

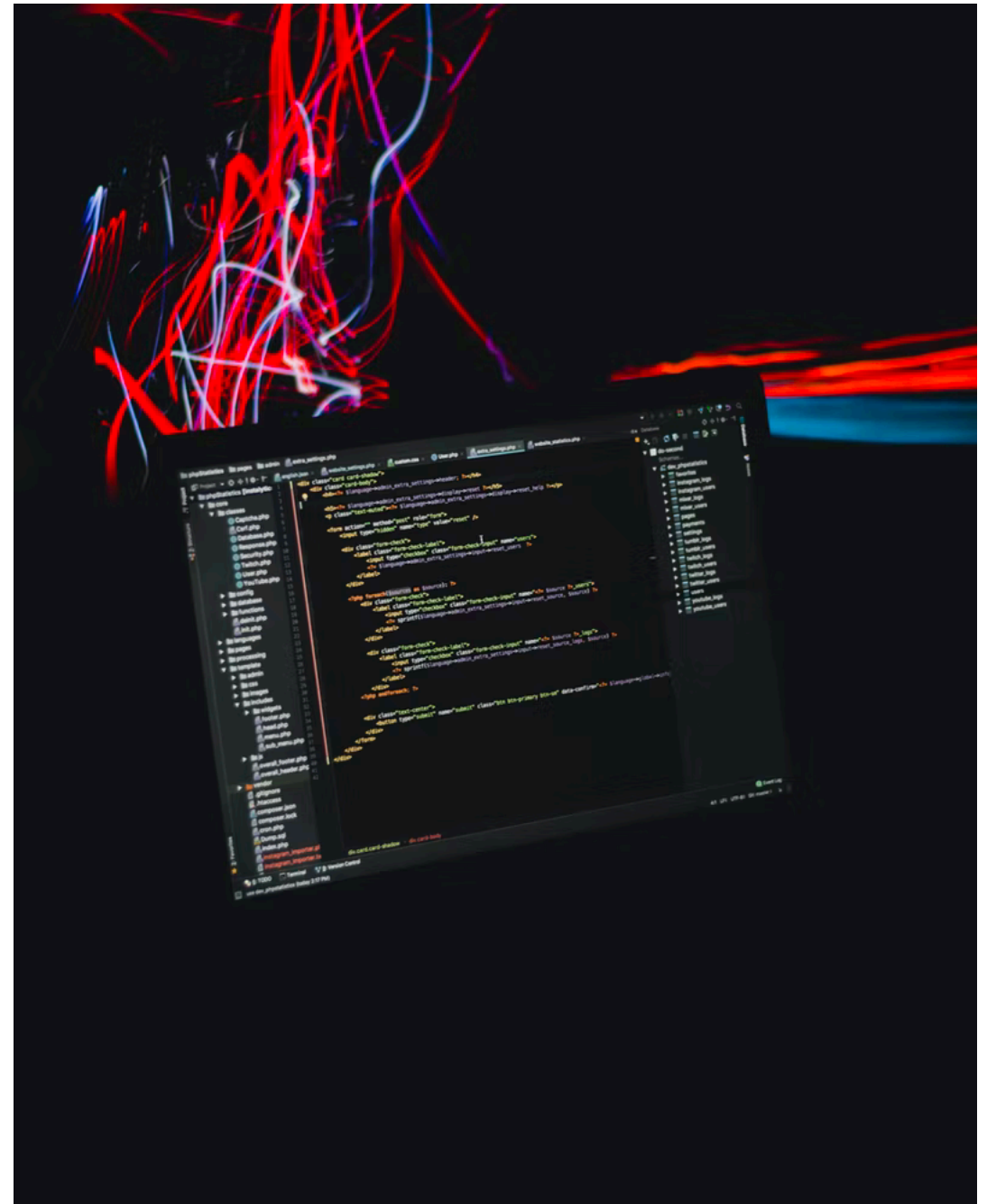
- We can set auto-commit to false and commit ourselves.
- Thus, we can ROLLBACK
- Not just when exceptions happen, but when certain conditions are met.



# SO, let's have a look at code!

- Transactions, committment, rollback
- SQL injections
- Prepared statements

**SO, let's have a look at code!**

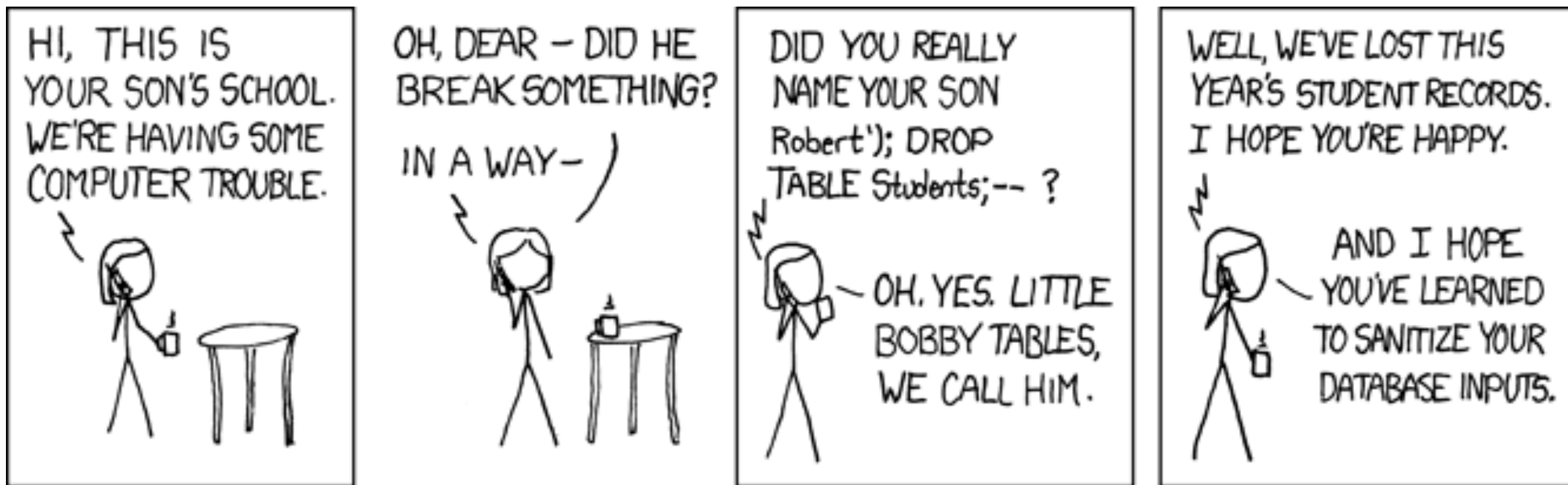


# SQL Injections

- A type of attack where a malicious party injects executable SQL code in parameters
- DEMO!



# SQL Injections



Credit: <https://xkcd.com/327/>



# So,... What can we do?

- Prepared... Statements
- DEMO!



## More material (tutorials and such)

- <https://www.javatpoint.com/java-jdbc>
- <https://docs.oracle.com/javase/tutorial/jdbc/basics/gettingstarted.html>
- <https://www.baeldung.com/java-jdbc>
- [https://alvinalexander.com/java/edu/JDBC-SQLProcessor/Simple\\_JDBC\\_Example.shtml](https://alvinalexander.com/java/edu/JDBC-SQLProcessor/Simple_JDBC_Example.shtml)
- <https://www.tutorialspoint.com/jdbc/jdbc-sample-code.htm>

## More material (prepared statements, rollback, etc.)

- <https://docs.oracle.com/javase/tutorial/jdbc/basics/prepared.html>
- <https://vladmihalcea.com/a-beginners-guide-to-sql-injection-and-how-you-should-prevent-it/>
- <https://www.geeksforgeeks.org/java-program-to-make-a-rollback/>
- <http://tutorials.jenkov.com/jdbc/preparedstatement.html>
- <https://www.tutorialspoint.com/jdbc/commit-rollback.htm>